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## FACSIMILE TRANSMITTAL COVER SHEET

DATE: April 8, 2002SPLR FILE #: UMO 1528FACSIMILE NUMBER BEING CALLED: (703) 872-9655

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: Examiner Paul Michl

THIS FACSIMILE IS BEING SENT BY:

NAME: Steven M. RitcheyNUMBER OF PAGES: 3 INCLUDING COVER SHEETTIME SENT: \_\_\_\_\_ OPERATOR'S NAME: Sue Amsler

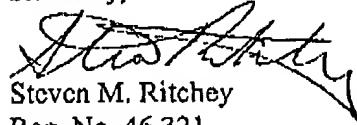
COMMENT(S)/NOTE(S):

Re: U.S. Appln. No. 09/532,839

Attached are the redacted pages for Exhibit A of the Rule 1.131 Declaration filed on March 22, 2002.

Thank you for your assistance.

Sincerely,

  
Steven M. Ritchey  
Reg. No. 46,321

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Formulation		Result from draw-down
	16g	
H <sub>2</sub> O	28g	
PG	43.6	Formed 1/ film. A clean good film.
Triton X-100	2.0	Compound X 1% gave hazy and cratering.
AMP 95	4.0	Cratering might be because comp X was put too much. To
Rheoplex 1088	434.2	to solve the problem, amount of comp X was cut
Dowplex 463	2.5	and make up by butyl cellulose at 50:50 ratio
Replace the surfactant		
Cpd X	5.0	butyl cellulose (ethylene glycol monobutyl ether)
butyl cellulose	5.0	
H <sub>2</sub> O	100.18	$\text{C}_2\text{H}_5-\text{O}-\text{CH}_2-\text{CH}_2-\text{OH}$ (increased hydrophilic film)

After mixing all the components, left the paint overnight before drawing (w. 3 mil thick). The results from draw-down was that there were some cratering and the surface of paint was not wet on the kimeta paper.

After the formulation was left for 2 days, the draw-down had been taken again. There were remain some cratering although this time it was better than before (it's drawing). The problem might be the surfactant used. So, the wetting agent Zonyl APC from DuPont was added about 5 drops. After mixing Zonyl APC into the formulation, it has cratering problem a lot. Since Zonyl is very expensive thus, we try to find other proper surfactant which has higher or lower HLB than Triton X-102 to replace compare the results so that we can predict the trend and choose the right type of surfactant to improve wetting.

Triton X-102      ethyl phenyl polyethoxy ethanol  
 Triton X-102      —  
 + Agaprol CA-720      —

HLB = 13.5  
 = 14.6  
 = 14.6      from Phoenix-Pow

2/20/96 Trial with the higher HLB surfactant [Triton X-102, HLB = 14.5]

Formulation	
	16g
PG	28g
PG	43.6
Triton X-102	2.0
AMP 95	4.0
Ucon 839	434.2
Dowplex	2.5
Cpd X	10.0
H <sub>2</sub> O	100.8

\* would be replaced by Cpd X + EB, EB, Texanol

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Master batch

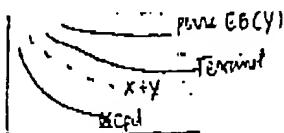
PE  
H<sub>2</sub>O  
surfactant  
talc  
pH modifier

} mix together in master batch, then weigh and add colorant and

Objective compare our cpd w/ benchmark = Texanol

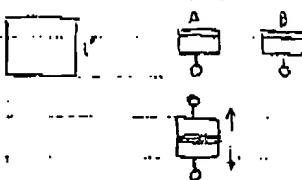
	(y)	
Texanol	cpd X (our cpd)	EB (ethylene glycol monobutyl ether)
10%	8%	15
9%	6%	10
12%	7%	5

Cpd X (our cpd) is Ethylene glycol soyoil derivative

MFPT PLOT

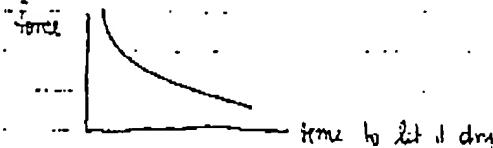
1<sup>st</sup> year get MFPT plot, and optimum condition

2<sup>nd</sup> year search for new test measuring, gloss, adhesion, impact, resistance, hardness.

Testing Stick Resistance (using Instron)

- 1) form surface of point, leave them at different time interval
- 2) put A+B together, set under mass for 10 min
- 3) remove mass
- 4) test Instron, see how much force need to apply to pull A+B

The longer time we wait, should be dryer  $\rightarrow$  not stick together, need less force



UCAR 5790 polyvinyl acrylic  
Fluorobond 325 polyvinyl acetate

IGI

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